

Work Order ID 80858

Thursday, March 01, 2012 3:53:52 PM

\*80858\*

Page 1

Item ID: D206-642-151

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Replacement Skidtube

Start Date: 3/1/2012 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 3/9/2012 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals: Process Plan:

Date: 12-03-1

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D3804

A

IIN-D206-642

O

100

0.00

\*100\*

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-151

CHG001

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 80858****\*80858\***

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Thursday, March 01, 2012 3:53:52 PM

Item ID: D206-642-151

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Replacement Skidtube

Start Date: 3/1/2012 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 3/9/2012 Req'd Qty: 1.00 **\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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110

0.00

**\*110\***

Skidtubes

0.00

Skidtubes

Memo

1-Deburr Fwd edge of tube

2- Remove ridge on inside of Fwd edge of tube as per Dwg D3804

3-Weld Fwd Cap as per Dwg D3804. Use aluminum rod. Grind D2647 to fit as required.

Pick:

Qty Part Number Description Batch

A/R Aluminum Rod *mid 20164*

4-Grind weld flush to cap on top surface only.

5-Cut Aft end as per dwg D3804 from front of tube and Deburr

6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D3804

7-Open holes for Aft end cap as per Dwg D3804 with #30 Drill Bit using DT8025.

8-Drill pilot holes using Dt8166 &amp; DT8169D &amp; DT9771.

9-Locate DT8732 from inner Aft saddle hole &amp; 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 &amp; D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 &amp; doubler leaving DT8732 for added support.

10- Drill D3286-1 doubler rivet holes in tube using # 30 drill, spot drilling doubler at the same time.

*CF 12-3-2**De 12/03/05**SAD 12-03-05*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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**NOTE:** Date & initial all entries

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Item ID: D206-642-151

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Replacement Skidtube

Start Date: 3/1/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 3/9/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

**\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

**\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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11-Working from the center out, drill # 30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D3804

13-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder

14-Remove indexing edge using DT8741 as per Dwg D3804

15-C'sink GHW rivet holes as per Dwg D3804

16- Open Aft cap hole #6.

\*\*\*\*no wearplate holes for this skidtube\*\*\*\*

17-Deburr tube and blow out chips from inside the tube

SAO 12-03-05

120

QC6- Inspect dimensions to drawing

0.00

**\*120\***

QC

Memo

0.00

Quality Control

50719/05

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Item ID: D206-642-151

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Replacement Skidtube

Start Date: 3/1/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 3/9/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

**\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

**\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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140

Chemical Conversion Coat per QSI005 4.1

0.00

**\*140\***

HandFinish

Memo

0.00

Hand Finishing

① SAI 12-03-05

150

QC7-Inspect Chemical Conversion Coat

0.00

**\*150\***

QC

Memo

0.00

Quality Control

DP 12-3-6

160

Skidtubes

0.00

**\*160\***

Skidtubes

Memo

0.00

Skidtubes

1-Open holes to finished size as per Dwg D3804, (without cutting fluid)

2-C'sink crossbolt spacer holes as per Dwg D3804(without cutting fluid)

3-Deburr and blow out all chips from inside the tube

De 12/03/06

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries



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Item ID: D206-642-151

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Replacement Skidtube

Start Date: 3/1/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 3/9/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

170

QC6- Inspect dimensions to drawing

0.00

**\*170\***

QC

Memo

0.00

Quality Control

DP 12-3-6

180

Skidtubes

0.00

**\*180\***

Skidtubes

Memo

0.00

Skidtubes

1- Locate, install and rivet doublers as per Dwg D3804. Micro-shave rivets as required

2-Bond D2654-1 web in place as per QSI 015. Ensure holes line up. Allow 12

Hrs. cure time before cutting

Start Date: 12/03/06 Time: 10:00

Finish Date: 12/03/06 Time: 11:00

Pick:

Qty Part Number Description Batch

A/RSikaflex-291 119999

Sikaflex expire date: 12/08/13

DL 12/03/06

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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Item ID: D206-642-151

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Replacement Skidtube

Start Date: 3/1/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 3/9/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start

**\*NR1\***

QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

**\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00

**\*190\***

QC

Memo

0.00

Quality Control

1 0 BE 12/03/07

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 80858**

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Item ID: D206-642-151

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Replacement Skidtube

Start Date: 3/1/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 3/9/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Run Start

**\*NR1\***

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop

**\*NR2\***

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

200

0.00

**\*200\***

Skidtubes

Skidtubes

Memo

0.00

1-remove alodine from around hole and prepare for welding

2-Prep per QSI 005 and Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D3804. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

Pick:

QtyPart NumberDescriptionBatch

A/RAluminum Rod M120164

3-Grind welds flush as per Dwg D3804.

4-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D3804. Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required.

A/RSS Rod NONE

5-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D3804. Deburr

*BE 12/03/07**DP 12-3-15**CF 12.3.8  
DP 12-3-14  
Pto →*

W/O:		80858						WORK ORDER CHANGES	
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		

Part No: DZ06-667-151 PAR #: \_\_\_\_\_ Fault Category: Landy gear ~~SCRAP~~ skid shoe NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: SCRAP Disposition: SCRAP QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12/03/08	#	On the 11th hole from left employee ground down the Ride Floor to the table. P.C. training new employee	12/03/13 251042	Heat affected zone from weld repair would be too large. Area below ridge feels dented and would be an issue for customer inspections SCRAP CP 12-03-12	next Page		12/03/13 251042	8 12/3/12
		LDP						

NOTE: Date & initial all entries

Thursday, March 01, 2012 3:53:52 PM

**\*80858\***

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**Accept**

**\*N900040100\***

Setup Start \*NS1\*

Stop \*NS2\*

**Item Name:** Replacement Skidtube

**Start Date:** 3/1/2012      **Start Qty:** 1.00      **\*1\***

**Cust Item ID:**

**Required Date:** 3/9/2012      **Req'd Qty:** 1.00      **\* 1 \***

**Customer:**

**Reference:**

Run Start \*NR1\*

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Stop \*NR2\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

[illegible]

W/O: 8858		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D206-642-151 PAR #: \_\_\_\_\_ Fault Category: Skid tube NCR: Yes No DQA: Not Date: 12/04/04  
 Resolution: Rework Disposition: Rework QA: N/C Closed: OK Date: 12/4/4

NCR: 12-1315		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12.03.13		Excessive grinding at one hole location. <del>see previous box for comment</del> MC	CP 12.03.13	Fill "dent" with weld and grind flush Acceptable based on DS email Affected hole is not wearplate hole	BE 12/03/14 12-3-14	OK 12/04/02	CP 12.03.15 12/04/02	

NOTE: Date & initial all entries



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Item ID: D206-642-151

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Replacement Skidtube

Start Date: 3/1/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 3/9/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Run Start

**\*NR1\***

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop

**\*NR2\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	QC5- Inspect part completeness to step on W/O	0.00							
<b>*230*</b>									
QC	Memo	0.00							
Quality Control									
240	Pressure Wash per QSI005 4.3	0.00							
<b>*240*</b>									
HandFinish	Memo	0.00							
Hand Finishing									
250	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
<b>*250*</b>									
Powdercoat	Memo	0.00							
Powder Coating									
	START TIME: <u>2:05</u>								
	OVEN TEMPERATURE: <u>325</u>								
	FINISH TIME: <u>2:35</u>								

*1 X 4 m 12/03/17**1 BL 12-9-19*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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**Work Order ID 80858**

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Item ID: D206-642-151

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Replacement Skidtube

Start Date: 3/1/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 3/9/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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260

QC3- Inspect Part Finish

0.00

**\*260\***

QC

Memo

0.00

Quality Control

1X Ø M-12/03/21

270

HandFinishing

0.00

**\*270\***

HandFinish

Memo

0.00

Hand Finishing

1-Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D3804. Clean excess adhesive.

1 BR 12-3-21

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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**NOTE:** Date & initial all entries

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Item ID: D206-642-151 Accept \*N900040100\* Setup Start \*NS1\*  
 Revision ID: Stop \*NS2\*  
 Item Name: Replacement Skidtube  
 Start Date: 3/1/2012 Start Qty: 1.00 \*1\* Cust Item ID:  
 Required Date: 3/9/2012 Req'd Qty: 1.00 \*1\* Customer:

## Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start \*NR1\*  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280		0.00							
*280*	HandFinishing					1		BR 12-3-21	
HandFinish	Memo	0.00							
Hand Finishing	1-Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive A/RSikaflex-291 119999 Sikaflex expire date: 12-8.								
	LH. 2- Install wearplate as per dwg								
	2-Wing Walk as per Dwg D3804 and QSI 005 4.4 Batch: 119094.								
290	QC3- Inspect Part Finish	0.00							
*290*									
QC	Memo	0.00							
Quality Control									

12 03 22 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Item ID: D206-642-151

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Replacement Skidtube

Start Date: 3/1/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 3/9/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Run Start

**\*NR1\***

Approvals:

Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Stop

**\*NR2\***

QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

300

QC5- Inspect part completeness to step on W/O

0.00

**\*300\***

QC

Memo

0.00

Quality Control

12/03/22 ①

310

Packaging

0.00

**\*310\***

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D206-642-151

Location: \_\_\_\_\_

PPP Rev: \_\_\_\_\_

PPP 80970

12/3/30 ②

320

QC21- Final Inspection - Work Order Release

0.00

**\*320\***

QC

Memo

0.00

Quality Control

12/4/12 ③

PL 12-0330

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Thursday, March 01, 2012 3:53:59 PM

Page 1

Work Order ID: 80858

**\*80858\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 3/1/2012

Required Date: 3/9/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 10.12.08 PER IIN REV.N DD VERF:EC  
REV:B 11.09.16 PER IIN REV.O DD VERF:EC

IPP

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2620

Manufactured

No

110

Each

30.0000

1

1

\*\*

CF 12-3-2

**\*D2620\***

Skidtube, 206 Skidtube

Location

Loc Qty

Loc Code

LG

30

77996

1

77999

10

78000

5

79542

1

79543

2

79544

8

79545

3

D2647

Manufactured

No

110

Each

63.0000

1

1

\*\*

BE12-03-04

**\*D2647\***

Cap

Location

Loc Qty

Loc Code

LG002

63

75482

63

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Thursday, March 01, 2012 3:53:59 PM

Work Order ID: 80858

**\*80858\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 3/1/2012

Required Date: 3/9/2012

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-04

Purchased

No

180

Each

7,334.000

52

52

**\*CR3212-4-04\***

Cherry Rivet

\*\*

*Pl 12/03/06*

Location

Loc Qty

Loc Code

ST331

168

116471

78

117816

3

118686

1

118840

16

119017

60

119075

10

st510

7166

119075

7166

*55*

D2654-1

Manufactured

No

180

Each

17.0000

1

1

**\*D2654-1\***

Web

\*\*

*Pl 12/03/06*

Location

Loc Qty

Loc Code

LG

17

79540

5

79541

10

80054

2

*(i)*

D3286-1

Manufactured

No

180

Each

121.0000

2

2

**\*D3286-1\***

Doubler

\*\*

*SAD 12-03-05*

Location

Loc Qty

Loc Code

LG002

217

74872

6

78014

93

ST046

-96

76772

22

*2*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Picklist Print

Page 3

Thursday, March 01, 2012 3:53:59 PM

Work Order ID: 80858

**\*80858\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 3/1/2012

Required Date: 3/9/2012

Start Qty: 1.00

Required Qty: 1.00

D2649 Manufactured No 200 Each 1,831.000 19 19

**\*D2649\***

Cross Bolt Spacer

\*\*

BE 12/03/07

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	1374	
77574	2	
79502	403	
79503	399	
79504	309	19
79565	261	
LG001	457	
65317	1	
68224	2	
68507	11	
71355	2	
72704	2	
72841	11	
73390	8	
73857	21	
73858	53	
73859	4	
73860	4	
78020	6	
78583	2	
79566	330	

D3286-3 Manufactured No 200 Each 125.0000 2 2

**\*D3286-3\***

Spacer

\*\*

BE 12/03/14

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	15	
78015	15	
LG001	110	
74117	1	
79557	109	2

Thursday, March 01, 2012 3:53:59 PM

Shop Packet Print

Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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# Picklist Print

Thursday, March 01, 2012 3:53:59 PM

Work Order ID: 80858

**\*80858\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 3/1/2012

Required Date: 3/9/2012

Start Qty: 1.00

Required Qty: 1.00

D2680-041

Manufactured No

210

Each

171.0000

1

**\*D2680-041\***

Nut Plate

\*\*

*DP 12-3-14*

Location

Loc Qty

Loc Code

ST013

116

78016

116

ST019

55

76790

55

210

Each

1,512.000

2

2

\*\*

*DP 12-3-14*

CR3212-4-03

Purchased

No

**\*CR3212-4-03\***

Cherry Rivet

Location

Loc Qty

Loc Code

FP002

522

114859

522

ST331

990

110139

2

119017

988

210

Each

24.0000

1

1

\*\*

*1 BL 12-3-21*

AN960JD416

NAS1149D0463J

Purchased

No

**\*AN960JD416\***

Washer

*HB 384*

Location

Loc Qty

Loc Code

ST351

24

116289

24

210

Each

767.0000

2

2

\*\*

*DP 12-3-14*

CCR264SS3-3

Purchased

No

**\*CCR264SS3-3\***

Cherry Rivet

Location

Loc Qty

Loc Code

ST331

767

113973

2

117849

129

119017

636

*2*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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# Picklist Print

Thursday, March 01, 2012 3:53:59 PM

Work Order ID: 80858

\*80858\*

Parent Item: D206-642-151

\*D206-642-151\*

Parent Item Name: Replacement Skidtube

Start Date: 3/1/2012

Required Date: 3/9/2012

Start Qty: 1.00

Required Qty: 1.00

MS27039-4-06

Purchased

No

210

Each

212.0000

1

1

\*MS27039-4-06\*

Screw

\*\*

BR 12-3-21

Location

Loc Qty

Loc Code

ST292

212

119075 ✓

212

1

D2651-1

Manufactured

No

270

Each

749.0000

6

6

\*D2651-1\*

Plug

\*\*

BR 12-3-21

Location

Loc Qty

Loc Code

FP001

884

57869

1

66445

10

69018

2

70827

2

70839

8

71037

8

77559

30

78584 ✓

245

79234

278

6.

FP-A

-135

77559

1

78124

164

D2651-3

Manufactured

No

270

Each

2,065.000

6

6

\*D2651-3\*

O-Ring

\*\*

BR 12-3-21

Location

Loc Qty

Loc Code

FP001

137

61962

12

73828

125

FP-A

1928

78126 ✓

1928

6.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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# Picklist Print

Thursday, March 01, 2012 3:53:59 PM

Work Order ID: 80858

\*80858\*

Parent Item: D206-642-151

\*D206-642-151\*

Parent Item Name: Replacement Skidtube

Start Date: 3/1/2012

Required Date: 3/9/2012

Start Qty: 1.00

Required Qty: 1.00

D3873-1 Manufactured No

280 Each

129.0000

14

14

\*D3873-1\*

Bushing

\*\*

BR 12-3-21.

Location

Loc Qty

Loc Code

ST067

79561.

129

64760

1

68247

4

73829

19

73830

2

79560

103

14.

D2646 Manufactured No

280 Each

60.0000

1

1

\*D2646\*

Aft Cap

\*\*

BR 12-3-21

Location

Loc Qty

Loc Code

FP002

79500

60

62678

5

68280

5

70945

1

71070

2

73294

1

73825

2

78018

44

1.

D3805-041 Manufactured No

280 Each

6.0000

1

1

\*D3805-041\*

Wearplate Assembly Fwd, Low Gear

\*\*

BR 12-3-21

Location

Loc Qty

Loc Code

FP001

78004.

1

76779

1

FP002

5

78002

5

1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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# Picklist Print

Thursday, March 01, 2012 3:53:59 PM

Work Order ID: 80858

**\*80858\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 3/1/2012

Required Date: 3/9/2012

Start Qty: 1.00

Required Qty: 1.00

AN3-37A Purchased No

280

Each

846.0000

7

7

**\*AN3-37A\***

\*\*

Bolt

Location

Loc Qty

Loc Code

ST353

846

117619

4

119086 ✓

842

NAS1149D0363J Purchased No

280

Each

2,337.000

7

7

**\*NAS1149D0363.J\***

\*\*

Washer

Location

Loc Qty

Loc Code

ST298

2337

117601

61

118077

1

118612

18

119537

309

120142 ✓

330

120308

618

120644

1000

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

ITEM	Qty -041	Qty -043	Part Number	Description
1	X		D3804-041	SKIDTUBE ASSEMBLY, 206 A/B LOW
2		X	D3804-043	SKIDTUBE ASSEMBLY, 206 A/B HIGH
5	1	1	D2600-1-160	EXTRUSION
6	1	1	D2646	AFT CAP
7	1	1	D2647	CAP
8	19	20	D2649	CROSS BOLT SPACER
9	6	8	D2651-1	PLUG
10	6	8	D2651-3	O-RING
11		1	D2654-3	WEB
12	1		D2654-1	WEB
13	1	1	D2680-041	NUT PLATE
14	2	2	D3286-1	DOUBLER
15	2	2	D3286-3	STUD
21	2	2	AN960JD10L	WASHER
22	1	1	AN960JD416	WASHER
23	2	2	CCR264SS3-3	RIVET
24	2	2	CR3212-4-03	RIVET
25	52	52	CR3212-4-04	RIVET
26	2	2	MS27039-1-08	SCREW
27	1	1	MS27039-4-06	SCREW

#### NOTES

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 12.5 lb
- 9) WELD PER DART QSI 004
- 10) BENDING: DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 11) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 12) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)

NO-80858 MLJ  
12/03/02

RELEASED  
09.03.03  
PC ECN 09-538

A	NEW ISSUE	MB	08.07.07
REV.	DESCRIPTION	BY	DATE
DESIGN	91		
DRAWN	91		
CHECKED	91		
MFG. APPR.	91		
APPROVED	91		
DE APPR.	91		
DATE	08.07.07		

DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWING NO. D3804	REV. A SHEET 1 OF 5
TITLE SKIDTUBE ASSEMBLY, 206A/B	SCALE NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries



80858



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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

00058



DESIGN	99	<b>DART AEROSPACE USA, INC</b>	
DRAWN	J	<b>PORT HADLOCK, WA</b>	
CHECKED	99	DRAWING NO.	REV. A
MFG. APPR.	EE	D3804	SHEET 3 OF 5
APPROVED	140	TITLE	SCALE
DE APPR.	140	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE PROPERTY OF DART AEROSPACE CORPORATION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR DISSEMINATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

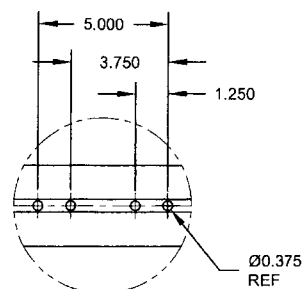
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

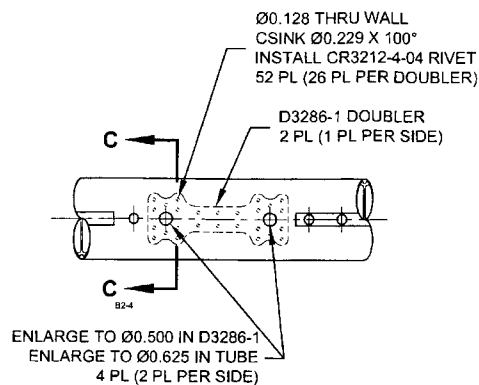
**NOTE:** Date & initial all entries

RELEASED  
09.03.03



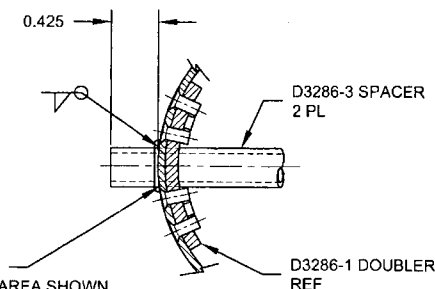
**DETAIL A**  
SCALE NONE

D6-2  
C2-2  
D6-3  
C2-3



**DETAIL B**  
SCALE NONE

C3-2  
C3-3

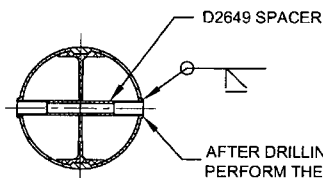


- TO INSTALL D3286-1/3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH OUTSIDE SURFACE OF ROUND TUBE
  2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
  3. ENLARGE HOLES IN D3286-1 TO Ø0.500
  4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.03 X 45°
  5. RIVET D3286-1 TO TUBE
  6. INSERT D3286-3 SPACER
  7. WELD IN PLACE AND GRIND FLUSH

80058

**SECTION C-C**  
PARTIAL SECTION  
SCALE NONE

C6-4



**SECTION D-D**  
FOR Ø0.375 HOLES ONLY  
SCALE NONE

A4-2  
A4-3

- AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.03 X 45°
  2. INSERT D2649 SPACER
  3. WELD INTO PLACE AND GRIND FLUSH
  4. CBORE TO Ø0.313 X 0.75 DP (EXCEPT WHERE INDICATED)

DESIGN	91	<b>DART AEROSPACE USA, INC</b>	
DRAWN	91	PORT HADLOCK, WA	
CHECKED	91	DRAWING NO.	REV. A
MFG. APPR.	91	D3804	SHEET 4 OF 5
APPROVED	91	TITLE	SCALE
DE APPR.	91	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

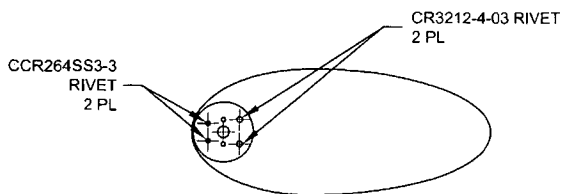
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

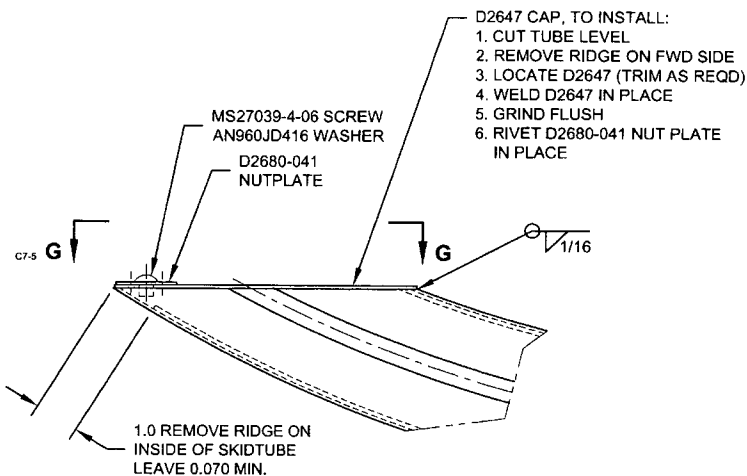
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

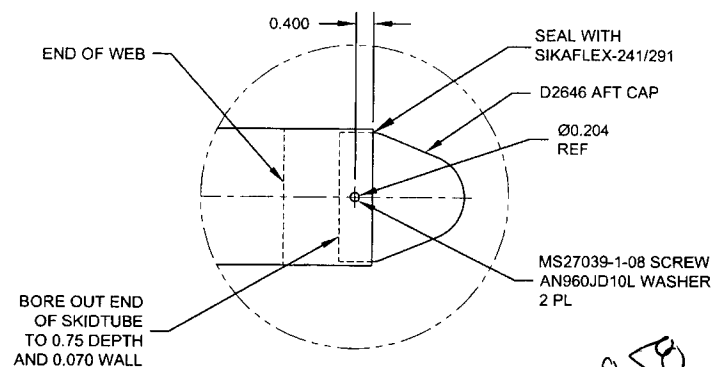
RELEASED  
09.03.03



**VIEW G-G**  
SCALE NONE A7-5



**DETAIL E**  
SCALE NONE B7-2 B7-3



**DETAIL F**  
SCALE NONE B2-2 B2-3

80850

DESIGN	97	<b>DART AEROSPACE USA, INC</b>	
DRAWN	97	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D3804	SHEET 5 OF 5
APPROVED	97	TITLE	SCALE
DE APPR.	97	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	<small>COPYRIGHT © 2008 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



NO. 285

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 79322  
Part number: A206-642-541  
Description: Skid tube  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminum  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier David Hunt Date of Test Coupon 12.03.14  
Welder Barclay Elliott Date of Test Coupon 12.03.14

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

## Chris Provencal

---

**From:** David Shepherd <dshepherd@dartaero.com>  
**Sent:** Tuesday, March 13, 2012 12:22 PM  
**To:** 'Chris Provencal'  
**Cc:** 'Mike Petsche'; 'Bill Beckett'  
**Subject:** RE: NCR D206-642-151

Chris,

If the holes is NOT used for attaching training wearplates, then I am OK with doing the weld repair that you have suggested. If the hole is used for attaching training wearplates, then I think the tube should be scrapped.

Bill,

This is probably going to Ft Rucker ... If the hole is not used for attaching training wearplates, are you OK with the weld repair, or would you prefer to scrap to avoid any potential problems.

David

---

**From:** Chris Provencal [<mailto:cprovencal@dartaero.com>]  
**Sent:** March-13-12 8:52 AM  
**To:** David Shepherd  
**Cc:** Mike Petsche; Bill Beckett  
**Subject:** NCR D206-642-151

David,

Qty(1) D206-642-151

The hole in the attached picture is in the middle of the skidtube, 2<sup>nd</sup> hole fwd of the GHW area. Over-eager grinding resulted in a heavy chamfer on the ridge. It also removed some material on the wall of the skidtube. The area marked in purple (attached pic) has a transition to about 0.015" of material removed. To a customer it would feel like a dent.

We could try doing a weld repair in the area, applying weld then grinding smooth. This would create a heat affected zone and, per the ICA, would technically limit where the customer is allowed to do future repairs. I would be inclined to scrap it.

The tube is complete other than the finish. With the GHW doublers/rivets there is a large amount of work invested in the tube. Would you accept the repair based on the fact its in the middle of the tube and near the neutral axis?

-Chris